amputation. The impact of social context is tested by including patients from the US and Tanzania (TNZ).

Methods: MLE amputees were recruited from US and TNZ sites in a prospective study. Data collected included demographic, social integration (CHART), walking function (Six Minute Walk Test) and QoL (EQ5D). χ^2 and ANOVA tests were used to assess association between social integration and outcomes. Multivariable logistic regression analysis, was performed to assess the role of social context.

Results: Of the 90 enrolled patients, 50 (56%) were from the US, 58 (64%) were male, with a mean age of 64.4 years. Patients with high social integration had a trend toward improved function defined by a score of 171 meters or better (36% v 66% v 74%; $P = .055$) and significantly higher mean EQ5D scores (0.65 v 0.70 v 0.79; $P = .021$). Findings were more dramatic in the US sub-group for both function (17% v 38% v 74%; $P = .008$) and QoL (0.52 v 0.58 v 0.79; $P = .001$). In a multivariate analysis, the TNZ site was not associated with less favorable function ($P = .783$) or QoL ($P = .364$).

Conclusions: In the US population, increased social integration is associated with both improved function and quality of life outcomes among amputees. This effect is attenuated in TNZ, likely due to differences in social context. Steps should be taken to identify and aid amputees with poor social integration in the US and factors associated with low function elsewhere.

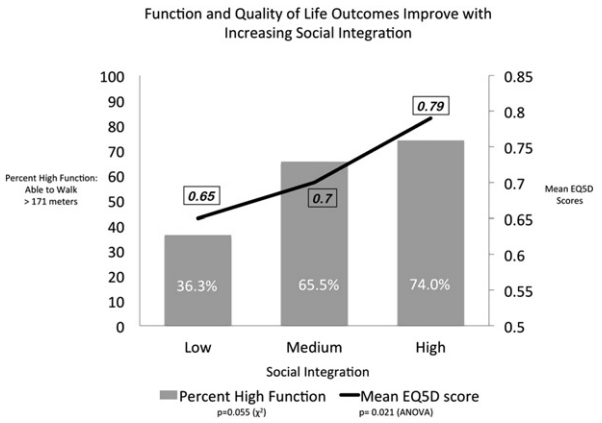

Fig.

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RR27.

SFA Intervention Surveillance: Where Is the Benefit?

Joseph Wuamett, Jordan R. Sasson, Jamie Schwartz, Michael Dudkiewicz, John C. Lantis. Vascular Surgery, St. Lukes - Roosevelt Hospital Center, University Hospital of Columbia University College of Physicians and Surgeons, New York, NY

Objectives: While many vascular surgeons follow the algorithm of postoperative bypass vascular evaluation including non-invasive flow studies (NIFS) and bypass graft duplex (BGD) at 1, 3, 6 months and annually thereafter, the data surrounding this recommendation is low. It has been shown that routine BGD scanning following autogenous lower extremity bypass has not proven to be cost-effective. The TASC II document recommends a biannual assessment of exercise NIFS for 2 years postoperatively as level C evidence. Superficial Femoral Artery (SFA) Percutaneous Transluminal Angioplasty/Stent (PTA/S) trials have required similar schedules of postprocedure evaluation. We chose to evaluate the benefit of postprocedure imaging.

Methods: We undertook a retrospective review of a prospective database looking at SFA intervention. The number of follow up visits, frequency of changes in exam, changes in postprocedure NIFS and BGD were analyzed.

Results: 104 patients had SFA interventions (46 PTA, 46 PTA/stent, 8 atherectomy, 4 PTA/lysis). Initial studies (NIFS and/or BGD) within 1-7 weeks showed a change (ABI $< .7$ and/or 4:1 peak systolic velocity ratio) in 3.1% of cases, at 3 months an additional 41% showed change (RR > 1.0; $P < .05$); at 6 months only an additional 8% showed change (RR < 1.0; $P > 0.05$). Kaplan Meier analysis revealed a lack of significance at the 1 year mark and beyond due decreased follow up.

Conclusions: Of the 547 postprocedure perfusion assays performed in these 104 patients the statistically significant interval appears to be at the 3 month postprocedure visit. While the initial study acts as a baseline the utility of further testing does not appear to add significant additional information on a cohort basis. Like algorithms for distal bypass there did appear to be better correlation when coupled with return of symptoms and or change in physical exam.

Author Disclosures: M. Dudkiewicz: Nothing to disclose; **J. C. Lantis**: Nothing to disclose; **J. R. Sasson**: Nothing to disclose; **J. Schwartz**: Nothing to disclose; **J. Wuamett**: Nothing to disclose.

RR28.

Predictors of Major Amputation With Patent Bypass Grafts

Ann D. Smith[1], Maria J. Schaumeier[2], Alexander T. Hawkins[3], Nathanael D. Hevelone[2], Louis L. Nguyen[1]. [1]Brigham and Women's Hospital, Boston, Mass; [2]Center for Surgery and Public Health, Boston, Mass; [3]Massachusetts General Hospital, Boston, Mass

Objectives: Despite patent bypass grafts, some patients receive major amputations (MA). We analyzed the frequency and predictive factors leading to MA in the presence of patent lower extremity bypass grafts (LEB).

Methods: Data from PREVENT III, a large prospective randomized trial of 1404 patients who underwent LEB for critical limb ischemia (CLI) was queried for outcomes. The primary endpoint was MA with patent (PMA) or

occluded (OMA) LEB. Variables identified on univariate analysis (inclusion threshold $P < .08$) were included in a multivariable logistic regression model to identify independent predictors.

Results: Of 1404 LEB patients, 162 (11.5%) had MA, 89 (6.3%) with patent and 73 (5.2%) with occluded LEB. For PMA, 21 (23.6%) had critical graft stenosis, of which 17 (81.0%) underwent revision, with mean time to revision of 50.76 days (SD ± 55.49). Minority race (OR, 2.69; CI, 1.28-5.66; $P = .0092$), diabetes (OR, 4.14; CI, 1.20-14.24; $P = .025$), lower baseline activity score (OR, 1.92; CI, 1.24-2.98; $P = .0036$), and negative change in 3-month activity (OR, 1.61; CI, 1.22-2.13; $P = .0007$) were predictors for PMA, while tissue loss was not predictive (OR, 2.32; CI, 0.66-8.08; $P = .19$).

For OMA, 64 (87.7%) had critical graft stenosis but only 35 (54.7%) underwent revision, with mean time to revision of 76.11 days (SD ± 80.14) and mean time to MA of 107.37 days (SD ± 103.39).

Conclusions: PMA patients had lower rates of graft stenosis, but were revised earlier than their OMA counterparts. Non-graft-related factors (demographic and functional activity) also influenced PMA. Further investigation into PMA may optimize treatment decisions.

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RR29.

Long Term Outcomes and Sac Volume Shrinkage After Endovascular Popliteal Artery Aneurysm Repair

Michele Piazza[1], Mirko Menegolo[1], Alessandra Ferrari[1], Joseph J. Ricotta[2], Franco Grego[1], Michele Antonello[1]. [1]Vascular and Endovascular Surgery Clinic, Padova University, Italy; [2]NorthSide Heart and Vascular Institute, Atlanta, Ga

Objectives: To evaluate long term outcomes and sac volume (SV) shrinkage after endovascular popliteal artery aneurysm repair (EVPAR).

Methods: A retrospective review of EVPAR cases performed between January 1999 and December 2012. SV shrinkage, long term patency, limb salvage (LS), and survival (S) were evaluated with K-M estimates. Anatomical characteristics and clinical presentation were evaluated for their association with patency using multiple logistic regression.

Results: 46 EVPAR procedures in 42 patients. Mean age was 68 yr, 86% were male; mean SV 42 ± 12 cm^3. Elective repair in 91% of cases, while 9% treated for rupture or thrombosis; 56% were asymptomatic, 35% had claudication and 9% rest pain. Technical success was 98%. At mean follow-up of 84 months (range, 6 to 138 months) primary, assisted primary, and secondary patency was 63%, 68%, and 68%; LS was 96% and S 81%. Of the 13 limbs with stent graft failure, seven required conversion, two underwent amputation, while four remained with mild claudication. Of those with graft occlusion, 61% (8 out of 13) of cases occurred within the first year of follow-up. The overall mean difference in aneurysm SV shrinkage at 7 years was significant (42 ± 12 cm^3 vs 21 ± 8 cm^3; $P = .02$). The association of covering a length >20 cm and distal landing zone between 1 and 1.5 cm from the take off of the anterior tibial artery (ATA) was a negative predictor for improved patency (OR, 3.05; 95% CI, 1.9 to 2.3; $P = .005$).

Conclusions: EVPAR provides successful aneurysm exclusion with acceptable long term patency, excellent LS and S. However, close surveillance is required, particularly within the first postoperative year. Patients requiring coverage >20 cm and a distal landing zone between 1 and 1.5 cm from the ATA may be at increased risk for failure.

Author Disclosures: M. Antonello: Nothing to disclose; **A. Ferrari**: Nothing to disclose; **F. Grego**: Nothing to disclose; **M. Menegolo**: Nothing to disclose; **M. Piazza**: Nothing to disclose; **J. J. Ricotta**: Nothing to disclose.

RR30.

Bone Marrow Aspirate Injection for Treatment of Critical Limb Ischemia With Comparison to Patients Undergoing High-Risk Bypass Grafts

Kristina A. Giles, Philip P. Goodney, Eva M. Rzucidlo, Daniel B. Walsh, Richard J. Powell. Vascular Surgery, Dartmouth Hitchcock Medical Center, Lebanon, NH

Objectives: Bone marrow aspirate injections (BMA) in the treatment of patients with critical limb ischemia (CLI) is a potential treatment option in poor candidates for standard revascularization procedures. While clinical trials are ongoing, there is little comparative data to assess its efficacy compared to bypass.

Methods: 19 patients with poor revascularization options underwent BMA. Outcomes were compared to a cohort of 42 CLI patients undergoing infrainguinal bypass felt to be at high risk for graft failure (previous endovascular treatment or bypass, tibial target, and tissue loss). BMA patients underwent harvest of 120-240 mL of

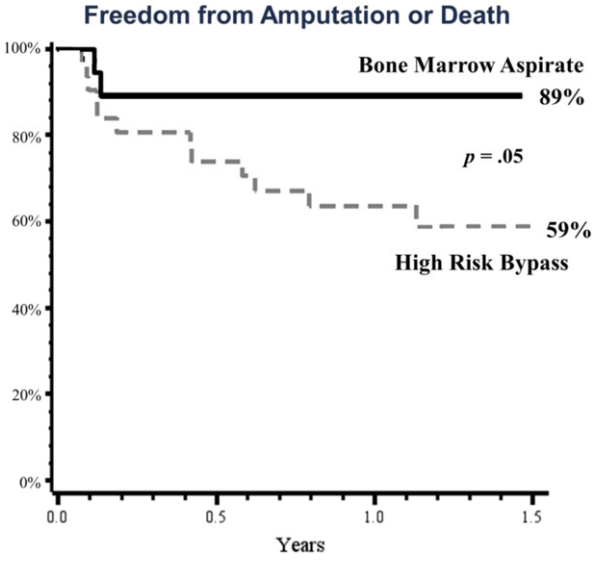

Fig.